

UNDERFILL COMPOSITIONS

ABSTRACT OF THE DISCLOSURE

An underfill composition having improved mechanical properties resulting from the inclusion of a novel "core-shell" substance. The core-shell substance includes a fine powder, whose particles each having an outer shell with a  $T_g$  significantly above room temperature, and an inner core with a  $T_g$  significantly below room temperature. The shell substance often includes an acrylate or methacrylate and the core includes a wide range of materials, such as acrylates and silicone or butadiene-based rubbers.